

ground handling

INTERNATIONAL



EXCLUSIVE

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Market share for Li-ion batteries will rise to 20% in the next five years



The time has come to tackle the problem of ULD shortages.

ULD shortages have been affecting the industry for a long time, exacerbated by the pandemic disrupting markets, but now there is a real urgency to solve the problem as experts predict a perfect storm is coming as we head into the winter months.

Rising pallet costs, supply issues, trade imbalances and competitive demands are all contributory factors to ULD shortages but one main inherent cause which seems to be constantly sidelined is freight forwarders failing to return the ULD back to airlines on time.

With the exception of a few airlines, there

is currently no financial penalty in place for late return of equipment in the air cargo industry unlike other logistics industries. This is despite the fact demurrage is noted within the ULD Control Receipt (UCR).

Airlines find themselves in a catch-22 situation where they are resistant to charge freight forwarders for fear of losing their customers but at the same time, are losing business anyway by not having their asset returned back in time.

In the current climate where manufacturers have reached their capacity, the cost of making a new ULD has now doubled over the course of the last two years – the price of aluminium has doubled in the past two years, rising from \$1,500 to \$3,000 a ton today – and the ULD industry is now competing with other players like aerospace who rely on the same product. It is clear, as ULD Care puts it, that ignoring the issue of demurrage is no longer sustainable in the long term, and it's now time for the industry to take action and start applying demurrage fees.

In its recent White Paper: 'Demurrage charges for ULD equipment in Air Cargo', ULD Care is calling for demurrage for ULD in the industry to be standard practice.



“It is a low-hanging fruit that can return a considerable amount of money and equipment which airlines want”

Bob Rogers, ULD Care

world’s ULD owning airlines, there are currently around 20,000-25,000 empty ULDs that are overdue for return after five “free” days. This means, hypothetically, if airlines charged forwarders a \$25 a day demurrage cost, they would earn in the region of \$600,000 a day or \$200 million a year. “And this is on the low side, we believe,” said Rogers. “Ideally, the airlines will want to get their equipment back, but if they can’t get it back for whatever reason, they at least deserve to get their money back. We have got thousands of pallets sitting in freight forwarders sheds because they have no incentive to return them. This is not the solution to ULD shortages – there are many other factors – but it is low-hanging fruit that can return a considerable amount of money and equipment which airlines want.”

For decades ULD operations have often missed out on tech advancements but this has been changing thanks to improvements in technology, using Bluetooth Low Energy (BLE) tags, IoT and now smartphone apps, that all make tracking air freight equipment easier. Some airlines have already adopted in-house ULD tagging solutions, or in other cases work alongside ULD suppliers such as Jettainer or Unilode.

ULD Care, however, is calling for a common IT platform that all stakeholders can use to check the status of the ULD, especially when it is taken off-airport. So it is looking to update the current demurrage system, set up 50 years ago by the Interline ULD User Group (IULDUG), which only records ULD interline transfers but doesn’t capture transfers outside the airport terminal.

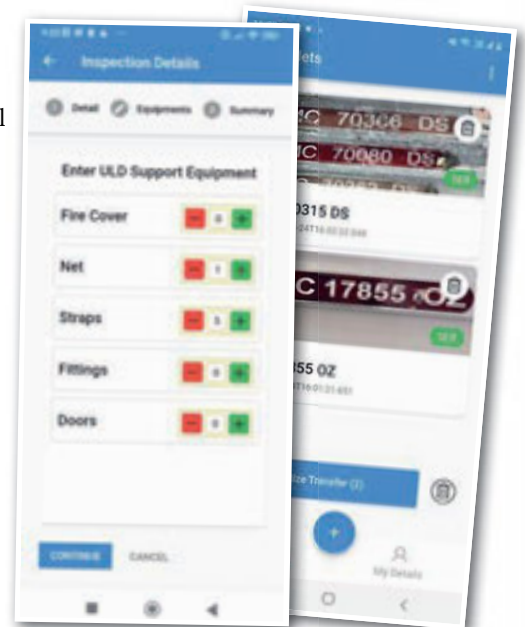
“We did a lot of work to change this, but we were flummoxed by legacy IT and EDI systems and business practices, and nothing really happened,” said Rogers.

In 2018, however, ULD Care considered using blockchain as the platform to capture and ran a proof of concept with SITA where they replicated the functions of the in-house system and proved that it worked and expanded to handle off-airport transactions. But now it believes potentially blockchain might be the solution for the future rather than for today.

“Although we liked blockchain very much and see a lot of longer term opportunity with it, for the shorter term we believe we will go more with a conventional solution,” he said.

Despite remaining tightlipped on a potential mobile app platform in the making, Rogers said it is already functional, with built-in change request capabilities etc in place. “It’s got everything,” he enthused. The next two challenges for ULD Care now is finding the finance and the launch customers to proceed to the next stage.

“It would be nice if the airline industry would ▶



“Nobody gets a free out of jail card in the maritime industry, they all pay a demurrage,” explained Bob Rogers, ULD Care Vice President. “They call it detention, which is about 3-4% of its annual revenue, working out to be around \$4 billion a year. No freight forwarder likes to tell you their opinion on the charges, but nobody likes to pay speeding or parking fines either.”

Charging demurrage fees to retrieve the ULD from customers would be significant source of revenue for airlines as ULD Care found out, however, it must be said that having the assets back is the primary point of any such fees and ideally there would be no need for any financial penalty to be paid by anyone at any time.

Based on data collected from 20% of the

invest in it but given the current state of the airlines, they are not that keen. But we think it presents a very interesting business model for investors to help us commercialise the operation of the platform.”

He stressed that ULD Care are the neutral party in the middle. “We are not trying to make money out of the demurrage, we are simply processing the data. We can’t get involved with the money side that would be anti-trust if we set a demurrage rate and number of days. So, all we are doing is setting up the platform and selling the data, which someone has got to pay for and run the system. It’s all about managing the data. We fully hope to receive data from the likes of Descartes, Jettainer, Unilode and others.”

More often than not, airlines are reluctant to implement a demurrage system fee because they feel it will upset their customers. “In shipping, it is universal but the airline industry is giving it all away as a competitive advantage but it is no longer a competitive advantage, it is a competitive disadvantage for anyone that does it. This doesn’t make sense, which is why we are putting a strong case forward to the industry and have been surprised by the many airlines when we have reached out to them and they all say: ‘You are right! This is a right mess, we have no control over these assets.’”

Rogers now hopes that more airlines will come on board with the project.

“We are not looking for any new technology,” he insisted. “We are applying existing technology and that reduces the risk hugely. We have already ran a demurrage system for 50 years. So it’s a no brainer, completely straight forward; we think it’s just a matter of overcoming industry inertia.”

TIACA and FIATA are among the trade associations that ULD Care is calling upon to assist in making the practice work across the industry.

Furthermore, Rogers points out, the air cargo industry needs to pursue a strong sustainability agenda, so achieving a higher utilisation rate for the roughly one million ULDs in global circulation can only be good for the planet.

Glyn Hughes, TIACA’s Director General, believes that commercial decisions on matters such as pricing, charges and fees are up to individual carriers to determine and communicate to their customers and partners.

“In the area of ULD management the industry needs to take some leaps forward starting with adoption of the digital control receipt (eUCR) which records the asset transfer,” said Hughes. “This will then lead to more effective asset management, control and utilisation. This should increase awareness of ULD safe condition and should promote more timely return to service which will enhance asset use optimisation. This is the key to get assets back into the system as quickly as possible.”



Tech players

Frank Hung, VP Sales and Marketing from Descartes, said he welcomed ULD Care’s call for an industry-wide IT platform to process ULD transfers as it would lead to greater accountability for all stakeholders.

“There is still no single platform for the airline, ground handler or forwarder and the customer to track the location and condition of their assets. This is something we are pushing hard for. If you can log in to an application dashboard and see these data points in almost real-time, there will be greater consensus between stakeholders because everyone can see the same data.”

By integrating BLE tracking information with demurrage capabilities, airlines have a single platform to automate the release and return of ULDs, capture the image of assets to record any damage, calculate demurrage fees, generate invoices, and reconcile billing, as well as send return and overdue alerts to forwarders or ground handlers.

Hung admitted the shortage of ULDs is still a concern since demand has soared as airlines opened their networks following the pandemic. “There is more demand but the supply remains the same. Manufacturers are up to their limits,” he said.

Descartes has the largest reader network for air cargo tracking with readers installed at more than 200 airports and it has extended its business to off-airport. Using Bluetooth tags (affixed to containers or pallets) that communicate with the reader via BLE and cellular, the customer can, from anywhere, use any internet-connected device to access real-time location information and shipment-level condition data and to know whose custody assets are in at any given time.

“We manage tracking from airport to airport and have expanded the network to outside the airport so we can also track the ULD to the next destination,” he said.

On the industry’s slow response to digitalisation, he said: “The airline industry has been really hesitant to digitalise and still uses systems from the 1970s. It wasn’t that long ago that we started using e-tickets, but the pandemic was a wake-up call for the airline industry to speed up its digitalisation, which will help all stakeholders.”

Moving forward, Descartes is continuing to open up its platform and hopes to expand its business by allowing third party tracking devices to join its network. ▶



“We manage tracking from airport to airport and have expanded the network to outside the airport”

Frank Hung, Descartes

“Customers don’t only want to track the physical location of their ULDs; they also want to know the condition of the cargo. During the pandemic, airlines were instrumental in shipping vaccines so the ability to monitor conditions such as temperature and humidity became critical. So, for the past 18 months we have been enhancing capabilities that can track light and humidity conditions while still using the same reader network.”

In other recent ULD developments, Unilode and OnAsset Intelligence have deployed the world’s first airborne IoT network which will tackle the issue of ULD shortages.

Joseph Jensen, Chief Technology Officer, said: “ULD shortages are caused by many reasons. This includes increased backlog of freight, extended travel times, ULD out-of-service rates, and lost items. If you were to pareto all the reasons a customer is short of ULDs you will see airlines lose visibility of ULDs between 3-15% of their fleet for times greater than 35 days. The deployment of the new IoT network helps immediately address the lost and missing ULDs and get them back into circulation. Once that is done the immense amount of data then can be used to make data-driven decisions on how to improve the supply chain. Shortages is just the thing we will attack.”

Unilode owns and operates the world’s largest digitally enabled ULD fleet, over 120,000 digital ULDs strong and growing, built upon a global network of OnAsset’s SENTRY IoT gateways installed at airports, repair stations, freight forwarder warehouses and trucks, and now this IoT network extends to the aircraft itself.

“Everything in the supply chain is becoming connected, and Unilode is leading the charge,” said Adam Crossno, OnAsset Intelligence CEO. “Extending real-time visibility to the aircraft itself, during flight and ground operations, is a real game changer because we can provide critical operational visibility at the very edge where it counts most. We can now deliver seamless location, status and chain-of-custody visibility across all aspects of the aviation supply chain, and that’s never been possible before.”

Jettainer

Jettainer recognised the challenges which Covid brought to the sector but it was able to

Jettainer operates an online skypooling platform for ULDs. This is a free of charge opportunity for airlines to balance ULD over-and/or understocks among each other. This is especially in times of ULD shortage an important tool. For more information visit <https://skypooling.com/home>

Enhancing global ULD insights with open IoT ecosystem



Undagrid, the creators of GSEtrack, are digitalising ground handling, MRO and terminal processes for customers such as Lufthansa and DHL since 2014. They are now introducing a practical, horizontal approach for exchanging IoT data from structural ULDs and pallets, without creating so-called silos or technology lock-in.

The ULD solution from Undagrid (based on self-harvesting-energy devices, hence avoiding maintenance and battery waste), is using globally available communication protocols. It creates a system by which surrounding devices from other suppliers, smart GSE or even smartphones, can interact and safely exchange location data from any ULD worldwide.

The data is owned and handled by the customer, or the respective service provider(s). The goal of Undagrid is that the industry creates an exchange model of data, where any company can keep its own business model, but in the foreground creating a seamless overview for any user of any ULD.

This also brings another benefit. Through the availability of generic technology and a step-by-step implementation approach, the overall costs are much lower than vertical solutions.



navigate the crisis and supply ULDs to customers at all times.

Around 100,000 ULDs out of approximately 900,000 worldwide are managed by Jettainer.

“We can confidently say that our business model has proven robust and crisis-proof,” said Thomas Sonntag, Managing Director at Jettainer.

Compared to airlines working with in-house solutions, Jettainer offers its customers a global network and local teams around the world. Its intelligent integrated IT solution, supported by AI, optimises the steering within the network.

“With our ULD management solution, we already provide our airline customers the highest level of transparency about their ULDs, including information about units that have left the airport or the airline network,” said Thorsten Riekert, Chief Sales Officer at Jettainer. “It is in our common interest to get the units back into productive circulation as quickly as possible. We are addressing this with a series of measures that we decide on together with our customers, ranging from raising awareness to improving processes and charging demurrage.

“If there is potential for an industry-wide solution that improves transparency overall, as suggested by Bob Rogers, we will not close our doors to it. Once the concept and objectives of ULD Care and the enhancements to the IULDUG system are more specific, we will be able to assess the benefits for our clients and the industry and how we can contribute.”

Most recently, staff shortages in particular continue to cause slow handling processes at many airports. To counteract bottlenecks, Jettainer plans ahead and coordinates very closely with its customers. For example, ULDs were steered from the outstations to the hubs in time for the peaks during the summer holidays.

And growth plays a big role at Jettainer. With the acquisition of new customers, the fleet managed by the ULD expert continues to expand. The latest additions are Norse Atlantic Airways, T’Way and Avianca Cargo. Etihad recently extended their cooperation. Further airlines are in the pipeline. **ghi**